

## REMARKS

Claims 1-31 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

### Section 103(a) Rejection:

The Examiner rejected claims 1-31 under 35 U.S.C. § 103(a) as being unpatentable over Moran et al. (U.S. Patent 6,633,835) (hereinafter, "Moran"). Applicants respectfully traverse this rejection for at least the following reasons.

In regard to claim 1, contrary to the Examiner's assertion, Moran fails to teach or suggest a system including a direct memory access (DMA) transfer engine coupled to data capture logic and to a system memory and configured to perform a DMA transfer operation of captured data events from the data capture logic to a region of a data event buffer in the system memory as portions of the captured data events become available from the data capture logic, and an application configured to access the data event buffer to process said captured data events without said DMA transfer operation being stopped, wherein in response to the region of said data event buffer being filled, the DMA transfer engine is further configured to perform the DMA transfer operation to a different region of the data event buffer without the DMA transfer operation being stopped.

The Examiner refers to Moran as disclosing the use of DMA to transfer packets from a capture subsystem 2804 to a focus subsystem 2812, and as further disclosing the use of a high priority queue and a low priority queue, where high priority flows of packets are stored in the high priority queue and low priority flows are stored in the low priority queue (col. 30, lines 19-27). Moran further discloses that buffers may be reallocated from the low priority queue to the high priority queue if an amount of data in the high priority queue exceeds a threshold (Figure 40, col. 30, lines 28-43 and col. 46, lines 21-42).

The Examiner characterizes the queue technique of Moran as a “method of detecting which [sic] a focus buffer is full.” The Examiner’s characterization of Moran is incorrect. Moran clearly describes the priority queuing mode technique as “[allowing] the expert task to focus on servicing priority packets over non-priority packets to prevent data loss.” (col. 30, lines 38-40). In other words, it is a technique for discriminating among different types of workloads that may occupy the focus buffer, not a technique for determining whether a region of the focus buffer is full.

Moran does not describe the threshold for reallocating buffers from the low priority queue to the high priority queue as being in any way a function of whether a region of the focus buffer is full. Instead, as described in Table 65, Moran clearly describes the queue management algorithm as first determining an average buffer depth of the high priority queue over time, then comparing this average buffer depth against a “minimum headroom” threshold to determine what action should be taken to manage the queues. This is entirely inconsistent with performing a DMA transfer into a different region of a data event buffer without stopping the DMA transfer in response to a first region of the data event buffer being filled, as required by claim 1. Determining whether a region of a buffer has been filled is a function of the instantaneous state of that region at any given point in time. Since Moran averages the buffer depth of the high priority queue, Moran cannot act in response to the queue actually being filled, since this state would only be detected after it persisted long enough for the average queue depth to equal the capacity of the queue. This is reinforced by Moran’s characterization of the threshold as a “minimum headroom” threshold. As a term of art, “headroom” connotes a degree of reserve or marginal capacity, which by definition implies that the queue is not in fact filled but has some remaining capacity.

The Examiner asserts that “Moran does not teach that the DMA process is stopped which [sic] the low priority queue is reallocated to the high priority queue.” As noted above, Moran’s reallocation of resources from the low priority queue to the high priority queue has nothing to do with performing a DMA transfer into a different region of a data event buffer without stopping the DMA transfer in response to a first region of

the data event buffer being filled, as required by claim 1. This fact notwithstanding, Moran's failure to teach that the DMA process is stopped does not amount to an assertion that Moran in fact teaches that the DMA process continues without stopping, as the Examiner seems to imply. In fact, Moran is completely silent as to DMA operation with respect to the priority queue mode of operation. Applicants note that with respect to the "fill and stop" and "wrap" modes of operation (col. 30, lines 1-9), Moran discloses the opposite of the requirements of claim 1. Specifically, in the "fill and stop" mode, data capture (and thus DMA transfer) does not continue, but in fact stops once the focus buffer is full. In "wrap mode," no attempt is made to determine whether the focus buffer is filled, and the buffer is instead continuously overwritten with data.

For at least the reasons given above, Applicants submit that the rejection of independent claim 1 is clearly unsupported by the cited art, as is the rejection of independent claims 11 and 22 which recite limitations similar to those of claim 1.

Without reference to a particular claim, the Examiner acknowledges that Moran fails to disclose the limitations (as in, e.g., claims 2 or 3) where the data event buffer is circular or linear, but that "one of ordinary skill would readily recognize that a circular or linear buffer is well known in the art, thereby making use of these types of well known buffers obvious to one of ordinary skill." With reference to claims 5, 16 and 26, the Examiner asserts that although Moran fails to disclose the limitation where a nondeterministic data bus conforms to the IEEE-488 GPIB standard, "[n]onetheless, however, one of ordinary skill would readily recognize that the IEEE-488 GPIB standard is well known in the art, thereby making use of this type of bus obvious to one of ordinary skill." Applicants traverse the Examiner's statements.

As argued with respect to similar rejections raised in the previous Office Action, these features may be well known in other contexts. However, as the Federal Circuit stated in *In re Kotzab*, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000):

Most if not all inventions arise from a combination of old elements. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather,

to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. (emphasis added)

Thus, the Examiner's assertion that circular and linear data event buffers as well as the IEEE-488 bus are well known does not establish that the prior art teaches Applicants' specifically claimed application of these elements in combination with the other claimed elements. The evidence of record does not indicate the desirability of circular and linear data event buffers or the IEEE-488 bus as combined in Applicants' claims. Moreover, as the Court of Appeals for the Federal Circuit recently explained in *In re Sang Su Lee*, Docket No. 00-1158 (Fed. Cir. January 18, 2002), conclusory statements such as those provided by the Examiner that a claim limitation is well known or common knowledge do not fulfill the Examiner's obligation. "Deficiencies of the cited references cannot be remedied by the [Examiner's] general conclusions about what is 'basic knowledge' or 'common sense.'" *In re Zurko*, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001). "Common knowledge and common sense ... do not substitute for authority." *In re San Su Lee*. Common knowledge "does not in and of itself make it so" absent evidence of such knowledge. *Smiths Industries Medical Systems, Inc. v. Vital Signs, Inc.*, 51 USPQ2d 1415, 1421 (Fed. Cir. 1999). Thus, Applicants submit that the rejection of these claims is improper.

With reference to claims 8, 19 and 29, the Examiner acknowledges that Moran does not disclose that processed data events are displayed substantially in real time with respect to the occurrence of the corresponding captured data events on a nondeterministic data bus, but asserts that "[Moran] does teach that [sic] real-time monitoring by network administrators. Therefore, one of ordinary skill in the art would readily recognize that some sort of display means could be used during the monitoring process." Applicants traverse the Examiner's statements. Applicants note that the referenced claims do not in fact recite "some sort of display means," but in fact a specific manner of display that the Examiner has acknowledged is absent from the art of record. As noted in the previous paragraph, Applicants submit that actual evidence and not mere speculation as to the existence of these features in the prior art is required. Absent such evidence, Applicants

submit that no *prima facie* case of obviousness has been established with respect to these claims.

Applicants further note that numerous ones of the dependent claims recite additional features not taught or suggested by any of the cited references taken individually or in any combination. However, as the rejection of the independent claims has been shown to be unsupported by the cited art, no further discussion of the dependent claims is necessary at this time.

### CONCLUSION

Applicants submit the application is in condition for allowance, and prompt notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above-referenced application from becoming abandoned, Applicants hereby petition for such an extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5150-83700/RCK.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,



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Date: May 11, 2006